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HISTORY OF PHARMACY MUSEUM OF THE FACULTY OF PHARMACY UNIVERSITY OF BELGRADE

MUZEJ ZA POVIJEST FARMACIJE FARMACEUTSKOG FAKULTETA UNIVERZITETA U BEOGRADU

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SUMMARY

*History of Pharmacy Museum at the Faculty of Pharmacy University of Belgrade was founded in Belgrade in 1952, thanks to many pharmacists and historians, but especially to Mr Andrija Mirković (Mpharm). His precious private collection of antiquities, which he donated to the Faculty of Pharmacy in Belgrade, subsequently a basic one for the Museum foundation, included apothecary vessels, apparatuses, manuscripts and books dated back to the XVI century. Furthermore, there were included many other antiquities, books and manuscripts from pharmacies on the territory of former Yugoslavia, mostly from Serbia, so the entire Museum collection comprises various apothecary vessels: 700 ceramic, wooden, glass, porcelain and halide glass jars, as well as the XIX century exhibits from Pravitelstvena Apoteka (the first state-owned pharmacy in Serbia, which operated between 1836-1859). The Museum collection of accessories and vessels is completed with a library and precious archive materials. The library itself includes the original manuscripts as well as the colour offprint of some manuscripts, and printed works; mostly scientific books, textbooks, journals and pharmacopoeias with drug tax lists. Some printed books dating back to the Late Middle Ages are very rare and precious, such as Curio's *Medicina Salemitana* (1612) and the Ruel's version of Dioscorides' *De materia medica*. This entire collection is considered a unique one in Serbia for its variety and greatness, representing a precious source for studying the History of Pharmacy and Pharmaceutical Ethics (as a subject was included into the Faculty's curriculum since 1952 and cancelled recently in 2008).*

Key words: history of pharmacy, museum, Belgrade, Serbia.

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MUSEUM FOUNDATION

History of Pharmacy Museums are institutions of utmost importance for pharmacists, representing an excellent research database for studying the development of pharmacy through the history.

History of Pharmacy Museum at the Faculty of Pharmacy University of Belgrade was founded in 1952, thanks to many pharmacists and historians, but especially to Mr Andrija Mirković (Mpharm), who donated his precious private collection of antiquities to the Faculty of Pharmacy in Belgrade. For its great cultural heritage of scientific value this collection has been under the state protection since 1948. It included apothecary vessels, apparatuses, manuscripts and books dating between XVI-XIX century. It was first exhibited in Belgrade in 1938, and then in 1949 with the occasion of the Annual Assembly of the Faculty of Pharmacy in Belgrade. This Mirković' collection was of enormous significance for founding the Museum, but in time there were included many other antiquities, books and manuscripts from the pharmacies on the territory of the former Yugoslavia, mostly Serbia, Vojvodina in particular.

At the 87th Assembly of the Faculty of Pharmacy in 1951 it was decided that a new subject of the curriculum *History of Pharmacy and Ethics* should be introduced. Subsequently, the History of Pharmacy Museum was founded, so it has become an excellent research corpus for the courses development till now. In the meanwhile, the preparations for the founding of the Museum took place, and when they were completed in 1954, the permanent exhibition was set up at the Institute for Galenic Pharmacy. This was two years after the starting of teaching *History of Pharmacy and Ethics* in the summer semester 1951-52.

The first professor of the *History of Pharmacy and Ethics* was Mr Andrija Mirković, a prominent pre-war Serbian pharmacist and pharmacy historian, also serving as a deputy Head of the Pharmacy Department of the Ministry of Public Health in the period before II World War. For a while, he served as a Secretary of the Permanent Professional Council for Drug Testing and Evaluation in the Kingdom of Yugoslavia, too. After Mr Andrija Mirković's retirement, the Museum was taken over by his research collaborator Mr Vojislav Marjanović, (MPharm), who was succeeded by Prof. Dr Dragan Stupar, and then by Assis. Prof. Dušanka Krajnović. When the Faculty was moved to a new building at 450 Vojvode Stepe Street, the Museum collection was placed into two suitable rooms and selected into two separate collection units. The Museum's



The History of Pharmacy Museum of the Faculty of Pharmacy, University of Belgrade.

Muzej za povijest farmacije Farmaceutskog fakulteta Sveučilišta u Beogradu



Part of the Museum collection with laboratory utensils and vessels.

Dio Muzejske zbirke s laboratorijskim priborom i posuđem



The cylindrical porcelain jars with a cap, from *Pravitelstvena Apoteka* (1836-1859).
Cilindrične porcelanske stojnice s poklopcem iz Pravitelstvene apoteke (1839.–1859.)



A section of an early 20th century *Materia medica* kept at the Museum.
Dio opsolentne Materiea medicae s početka XX. stoljeća, koja se čuva u muzeju.

exhibits are not open for public, and may be seen only in agreement with the professor for the *History of Pharmacy and Ethics*, who is also the Museum curator. Nowadays it represents a unique collection for its heritage and greatness, providing a valuable source for studying the development of pharmaceutical science in Serbia.

MUSEUM COLLECTION

At the time of its foundation, Prof. Mirković's collection belonged to the Museum, as a fundamental part completed with the original officina furniture of two pharmacies dating back to XIX century. Museum also got possession of the entire library and precious archival materials that belonged to Dr Vladimir Schiffer, the former General Secretary of the Chamber of Pharmacy of the Kingdom of Yugoslavia. In time the entire Museum collection has grown in size and variety of exhibits. Nowadays the Museum collection of apothecary jars comprises over 700 ceramic, wooden, glass, porcelain and halide glass vessels among them very precious pieces from Vojvodina apothecaries (cover page) and porcelain apothecary jars (fig. 3) used for solid and liquid preparations from *Pravitelstvena Apoteka*, the only state-owned pharmacy in Serbia (1836-1859).

APOTHECARY VESSELS FOR DRUG DISPENSING AND STORAGE

Apothecary jar collection includes those of *albarello* type, as well as bottles for liquid preparations with a wide neck, *chevrette*, and jars with a flat cap and a bulb on the top. The most numerous are wooden and glassy jars, while the others were made of porcelain, ceramic, and majolica. Most of them are permanently sealed with the usual Latin abbreviations and with a cap. Those without a cap were closed with a piece of leather, canvas, or parchment. *Albarello* jars are cylindrical vessels with a short pedestal for preserving solid and semi-solid preparations and raw materials. The bottle-type vessels of smaller dimensions were used to keep ethereal oils, that were obtained by distillation of the mixture of many drugs or oily extracts made by the extraction of drugs with fatty oils. Larger *chevrette* and bottle-type vessels were designed for liquid preparations: aromatic waters, acetates, medicinal wines, tinctures or extracts. There is also a smaller collection of preserved majolica jars from the pharmacy *Žiga* in Zemun, as well as a collection of interesting decorated glassy jars from the pharmacy *Kod Svetog Petra* (At St. Peter's) in Ruma, and from the

Oil painting - *Sveti Vrači (Healing Saints Cosmas and Damian)*, the protectors of all health care practitioners. The painting is a gift of Prof. Dr Dragan Stupar, who had run the Museum for many years and professor for the History of Pharmacy and Ethics.

Ulje na platnu - Sveti vrači Kuzma i Damjan, zaštitnici svih zdravstvenih radnika. Slika je novijeg datuma i dar je muzeju prof. dr. Dragana Stupara, njegova dugogodišnjeg upravnika, koji je predavao povijest farmacije s etikom.



The bust of academician Prof. Dr Jovan Tucakov, the professor of Pharmacognosy at the Faculty of Pharmacy in Belgrade specialised in medicinal herbs.

Bista akademika prof. dr. Jovana Tucakova, profesora farmakognozije na Farmaceutskom fakultetu u Beogradu i stručnjaka za ljekovito bilje



Original office furniture in solid wood from two 19th century pharmacies from Vojvodina (Serbia).

Dio oficine Muzeja za povijest farmacije Farmaceutskog fakulteta u Beogradu - originalni namještaj u punom drvetu potječe iz dviju vojvođanskih ljekarni iz XIX. stoljeća.



Part of the pharmacy furniture, nowadays being used to display apothecary jars.

Vitrina kao dio originalnog ljekarničkog pokućstva koji je sačuvan u Muzeju, a danas se koristi za izlaganje dijela kolekcije ljekarničkih stojnica.

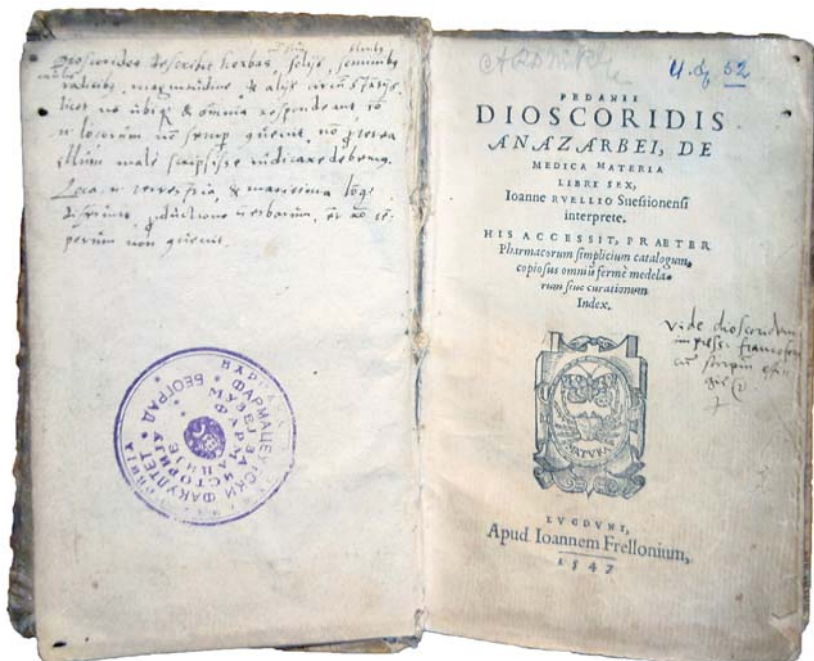
Part of the Museum
Library Collection.

Dio zbirke muzejske
knjižnice



Ruel's version of
Dioscorides' *De materia
medica* since 1547.

Ruelova verzija
Dioskuridova djela, *De
materia Medica libri
Quinque* iz 1547.



pharmacy *Kod zlatnog orla* (At the Golden Eagle's) in Petrovaradin (Novi Sad). Handmade cylindrical wooden vessels were used for preserving drugs made of animal or plant raw materials, and even though they look quite deteriorated, the old pharmacies evidently paid attention to aesthetics.

LABORATORY VESSELS AND ACCESSORIES

The Museum includes numerous accessories and equipment used in pharmaceutical laboratories to prepare or manufacture drugs and make simple chemical and toxicological analyses. Some accessories are well preserved and still usable for preparing pills, cachets, tablets, liquid extracts, decoctions, infusions or ointments.

Accessories for pill preparation include a pill making machine, also a device with knives for pills, and a plate with rollers as well as a few pill silvering or pill coating vessels. Manual tablet machine dating back to XIX century is one of the first used for tablet manufacturing. The pressure of the piston, which determined a tablet consistency, depended on the operator's physical strength. Tablets were also done manually, by filling a matrix or using a filling funnel. The accessory collection includes a number of moulds for handmade suppositories and a filling and closing apparatus for the preparation of cachets (dry-seal cachets). Cachets were small starch capsule (*capsulae amylaceae*) filled with the powders of unpleasant smell and taste, which were used before gelatin capsules. The wooden press for liquid extracts is a very rare museum exemplar of manual pressing equipment, probably since the late XVIII century, which was used for obtaining juice out of drugs and fruits. For making decoctions and infusion there were especially designed devices and several of such objects are preserved at the Museum collection. There is also a machine with three rolls for ointments and a manual press for tinctures since the XIX century. Other apothecary accessories include glass, porcelain or marble mortars of different dimensions used for pulverising and mixing, also bronze and marble plates for plants, and an old iron mortar with a big pestle, used to crush and pulverise plant drugs. There are also a few scales and equal-arm balances with calibration instruments, and an interesting ivory opium scale from China (since the recent period).

MUSEUM LIBRARY

The museum includes a vast archive and a library with materials spanning between XVI-XX century. Archive materials include photographs of pharmacies, documents, manuscripts, autobiographies of eminent pharmacists, and a number of diplomas (apprenticeship certificates i.e. *Testimonium tironum pharmaciae*), which were the precondition to enrol the pharmacy studies and master studies.

The library contains original manuscripts, printed works, and colour offprint of some manuscripts. The majority are scientific books, textbooks, journals, and pharmacopoeias with tax lists. Pharmacists' works of great importance for the National History of Pharmacy dating back to the XIX century are worth to be mentioned as follows: *Kvalitativna analiza mokraće* (*Qualitative Analysis of Urine*) by Mr Jovan Đurić (1877) and *Hilfstabeln zur Prüfung der chemischen Präparate* by Luka Panić, published in Wien in 1895. The work of Mr Jovan Đurić (PharmD) *Kvalitativna analiza mokraće* (*Qualitative Analysis of Urine*) published by him during the First and Second Serbian-Turkish War was used very soon as a handbook for apothecaries in hospitals full of casualties and suffering people from the war, and later as a biochemical handbook. Museum also preserves the first work on the history of pharmacy written into the Serbian language by Mr Kosta Nikolić (Mpharm): "*Pokušaj da se izloži razviće apotekarske struke za poslednjih sto godina*" (*A Tentative to Expose a Pharmaceutical Profession in the Last Hundred Years*) since 1904.

The collection includes all Serbian military and civil pharmacopoeas, as well as all Yugoslavian pharmacopoeas (1933, 1953, 1972, 1984) and original records related to the Committee that prepared the First Yugoslav Pharmacopoea (Ph. Yug. I) between 1918-1931. Museum also preserves many drug taxes used on the territory of the former Yugoslavia, the oldest one being *Taxa medicamentorum* since 1744 in the Austrian Provincial Pharmacopoea.

The archive keeps almost all pharmaceutical journals for professional training and research development published on the territory of Serbia and The Kingdom of Yugoslavia as follows: *Glas apotekarstva* (*Voice of Pharmaceutics*), *Apotekar* (*Apothecary*), *Aeskulap* (*Aesculap*), *Farmaceutski vijesnik* (*Pharmaceutical Herald*), *Vjesnik ljekarnika* (*Pharmacists' Herald*).

Some printed books dates back to the Late Middle Ages. They are very rare and significant such as Curio's *Medicina Salernitana* (1612) or the Ruel's version of Dioscorides' *De Materia medica* (1547). The later

one was printed by Joannes Frellonius in Lion and published in Latin. The Museum copy is well preserved, 8×12 cm in size, with leather covers and original ornaments. Although Ruel's version and commentary was reprinted many times over the XVI century, there are only a few samples of this edition preserved on the territory of the former Yugoslavia, and therefore is considered to be very precious and rare item.

Another valuable item is the offprint of the book *De simplicibus medicinis* by an eminent XII century physician from Salerno Matthaeus Platearius, which describes 273 simple drugs (*medicinae simplex*), mostly of plant origin. It includes the drug origin, composition, pharmacodynamic properties, forms, preparation and treatment, and is mostly based on Dioscorides' *De materia medica*. The Museum has an offprint of the 14th century edition of *De simplicibus medicinis* kept at the Basel University Library. The Museum copy is of excellent quality with illustrations in colour.

To conclude with, we point out the following: the entire Museum inventory has been collected on the territory of the former Yugoslavia, but most of it is from Serbia. All the items have been donated by individuals or institutions, as the Museum has no funds to buy them.

The Museum set before two main tasks: to collect and preserve pharmaceutical antiquities from deterioration and to stop their expatriation. Therefore it may be said that it really preserved the preciousness and varieties of it in all its segments, providing an excellent source for pharmacohistoriographic research mostly in Serbia, also for the entire territories of the Balkans.

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SAŽETAK

Godine 1952. osnovan je Muzej povijesti farmacije na Farmaceutskom fakultetu u Beogradu, velikim trudom mnogih farmaceuta i povjesničara farmacije, a prije svih Andrije Mirkovića, koji je svoju privatnu zbirku starina darovao kao osnovu za stvaranje Muzeja. O povijesnoj vrijednosti ove zbirke dovoljno govori podatak da je još 1948. stavljena pod zaštitu države kao kulturno blago koje sadrži posuđe, aparate, rukopise i knjige iz XVI., XVII., XVIII. i XIX. stoljeća, te je po svojoj opsežnosti, uređenosti i predmetima jedina zbirka ove vrste u Srbiji koja bi, u skladu s ovim, trebala poslužiti kao nastavna osnova za predmet Povijest farmacije i farmaceutska etika. Zbirka ljekarničkih posuda ima više od 700 stojnica iz keramike, drveta, porculana, stakla i hajlit stakla. Muzej raspolaže dijelom inventara jedine državne ljekarne u Srbiji iz XIX. stoljeća, Pravitelstvene apoteke (1836.–1859.). Zbirka pribora i posuđa obogaćena je knjižnicom i bogatim arhivskim fondom. Knjižnica obuhvaća originalna rukopisna i tiskana djela, kao i offprint kolor-izdanja nekih rukopisa. Prevladavaju stručne knjige, priručnici, časopisi i farmakopeje s taksama lijekova. Od tiskanih knjiga iz kasnog srednjeg vijeka izdvajaju se neke vrlo rijetke i vrijedne publikacije: Ruelleov prijevod (interpretacija) Dioskoridova djela "De Materia Medica libri Quinque" (1547.) i "Medicina Salemitana" (1612.).

Ključne riječi: povijest farmacije, muzej, Beograd, Srbija

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